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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,567	09/27/2001	Tai-Her Yang	YANG3073/EM/7272	8926
7590 05/11/2005			EXAMINER : LE, DANG D	
BACON & THOMAS 625 Slaters Lane - 4th Floor Alexandria, VA 22314			ART UNIT	PAPER NUMBER
			2834	

DATE MAILED: 05/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,567

Applicant(s)

YANG, TAI-HER

Examiner

Dang D. Le

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-24, 26-29 and 31-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-24, 26-29 and 31-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/29/ have been fully considered but they are not persuasive. The limitations in the claims do not specify when the reverse torque happens. The claims do not require that the reverse torque (of screw 10) exists before the rotor starts. The claims neither require that the electrical characteristics of the machine be varied instantaneously when the reverse torque exists. In the Martinek patent, the displacement of the rotor in response to the reverse torque causes the electrical characteristics of the machine to be varied as follows:

- After step b illustrated by the applicant in page 2 of the response, at the point the reverse torque acts on the shaft, the axial rotor position does not change, but the axial screw (10) position keeps changing until it activate the switch (17 in Figure 2), thereby changing the direction of the current flowing through the armature.
- Because the direction of the current is changed, the rotor will rotate the other way and the axial rotor position keeps changing until the left thrust bearings (6 and 7) contact each other.

Therefore, the rejection of claims 22-24, 26, 27, 29, and 34-36 are still deemed proper and repeated hereinafter.

The examiner would also like to take a note that in the art of motor and generator, where there is electric field, there is magnetic field and vice versa.

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Therefore, "said magnetic field structure" at the last line of claim 1 refers to "an electric field structure" at the second line.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 22-24, 26, 27, 29, 34-36, 39, and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Martinek (2,978,621).

Regarding claim 22, Martinek shows an electric machine, comprising:

- An electric field structure (2);
- A rotor (5) arranged to rotate relative to the electric field structure;
- A helical structure (9) situated between the rotor (5) and a rotary shaft (10), and a pre-stressed spring (8) situated at one end of the rotor, wherein said helical structure and said spring are arranged to enable axial displacement of the rotor relative to the shaft, and thereby vary electrical machinery characteristics of the electric machine (to pull other selected control structure 17), in response to reverse torque resulting from interaction between said rotor, said magnetic field structure, and a load or driving device (12).

Regarding claim 35, it is noted that Martinek also shows the external device for controlling the axial displacement of the rotor exteriorly (Figure 3 for DC motor and Figure 4 for AC motor).

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Regarding claims 23, 24, 26, 27, 29, 34, 36, 39, and 43, it is noted that Martinek also shows all of the limitations of the claimed invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 28 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinek in view of Price (1,131,551).

Regarding claims 28 and 38, Martinek shows all of the limitations of the claimed invention except for the machine being a generator.

Price shows a generator for the purpose of generating electricity.

Since Martinek and Price are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the machine as a generator as taught by Price for the purpose discussed above.

6. Claims 31-33, 37 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martinek in view of Hinz (2,694,781).

Regarding claims 31-33, 37, and 40-42, Martinek shows all of the limitations of the claimed invention except for properties of both said magnetic field structure and said rotor being varied in an axial direction to vary magnetic field density between the rotor

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and the magnetic field structure and thereby vary operational characteristics of the electrical machine with axial displacement of the rotor.

Hinz shows properties of both said magnetic field structure and said rotor being varied in an axial direction to vary magnetic field density between the rotor and the magnetic field structure and thereby vary operational characteristics of the electrical machine with axial displacement of the rotor for the purpose of reducing length.

Since Martinek and Hinz are all from the same field of endeavor; the purpose disclosed by one inventor would have been recognized in the pertinent art of the others.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to make the machine with varied properties in an axial direction of both magnetic field structure and rotor as taught by Hinz for the purpose discussed above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Information on How to Contact USPTO

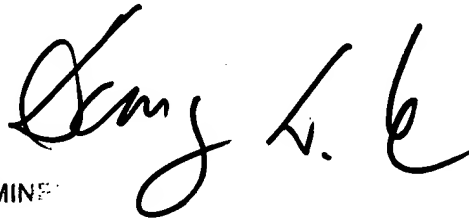
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dang D Le whose telephone number is (571) 272-2027. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571) 272-2044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

5/8/05

DANG LE
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Dang D. Le', is written over the printed name and title.